

WHAT IS CLAIMED IS:

1. A method of preventing damage to the terminal of a hermetic compressor having a motor, said method comprising the steps of:

sensing current draw through the terminal;

monitoring a signal representing the sensed current draw;

comparing the monitored signal to a reference signal

corresponding to a current draw substantially greater than a current draw associated with a locked rotor condition of the motor; and

rapidly disconnecting power to the terminal when the monitored signal exceeds the reference signal to prevent heating of the compressor terminal to a level likely to cause terminal venting.

2. The method of claim 1 wherein the reference signal corresponds to a current draw greater than twice the current draw associated with a locked rotor condition of the motor.

3. The method of claim 1 wherein the reference signal corresponds to current draw that will subsequently heat the terminal to a level that the differential temperature between a pin and surrounding glass of the terminal exceeds a level where stresses in the glass will cause failure of the pin/glass seal.

4. The method of claim 1 wherein the current draw is sensed externally of the compressor.

5. A method of preventing damage to the terminal of a hermetic compressor having a motor, said method comprising the steps of:

sensing power draw through the terminal;

monitoring a signal representing the sensed power draw;

comparing the monitored signal to a reference signal

corresponding to a power draw substantially greater than the power draw associated with a locked rotor condition of the motor; and

rapidly disconnecting power to the compressor terminal when the monitored signal exceeds the reference signal to prevent heating of the compressor terminal to a level likely to cause terminal venting.

6. The method of claim 5 wherein the reference signal corresponds to a power draw greater than twice the power draw associated with a locked rotor condition of the motor.

7. The method of claim 5 wherein the reference signal corresponds to power draw that will subsequently heat the terminal to a level that the differential temperature between a pin and surrounding glass of the terminal exceeds a level where stresses in the glass will cause failure of the pin/glass seal.

8. The method of claim 5 wherein the power draw is sensed externally of the compressor.

9. A hermetic compressor having a hermetically encased motor, a terminal assembly and a compressor fault interruption circuit, said fault interruption circuit comprising:

a current draw sensor;

a reference signal source representing a current draw threshold level that is much higher than locked rotor current;

a comparison circuit connected to receive inputs from said current draw sensor and said reference signal source; and

a disconnect device connected in series with and ahead of said terminal assembly and controlled by said comparison circuit.

10. A fault interruption circuit for disconnecting power to a compressor terminal under very high current conditions to prevent damage to the terminal, the circuit including:

a current sensing circuit disposed externally of said compressor for sensing input current provided to the terminal by a power source and outputting a sensed signal representing said current; and

a control circuit including a first circuit for outputting a reference signal representing input current higher than locked rotor current, a second circuit connected to the current sensing circuit and the first circuit for comparing the sensed signal to the reference signal, and a third circuit connected to the second circuit for externally disconnecting power to the terminal when the sensed signal exceeds the reference signal.

11. The circuit of claim 10 wherein the current sensing circuit includes a current sensor coupled to a line carrying power from the power source to the terminal, and a rectifier connected to the current sensor for converting an output from the current sensor into a DC voltage proportional to the sensed signal.

12. The circuit of claim 10 further including a regulator circuit connected to the power source, the regulator circuit including a regulator connected to the control circuit for outputting a DC voltage, the first circuit including a voltage divider network having an input connected to the regulator, the voltage divider network producing the reference signal from the DC voltage output of the regulator.

13. The circuit of claim 10 wherein the second circuit includes a comparator having a first input connected to the current sensing circuit output for receiving the sensed signal, a second input connected to the first circuit of the control circuit for receiving the reference signal, and an output for outputting a first signal when the sensed signal exceeds the reference signal.